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L3	20	((active adj directory) or (directory adj service)) and ((back\$4 or restor\$4) near3 (particular individual\$3 select\$2 specific one) near3 object)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/02 11:40
L4	4	((active adj directory) or (directory adj service)) and (restor\$4 near3 (particular individual\$3 select\$2 specific one) near3 object)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/02 11:42
L5	82	(restor\$4 near3 (particular individual\$3 select\$2 specific) near3 object)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/02 12:11
L8	52	(restor\$4 near3 (particular individual\$3 select\$2 specific) near3 object) and ((@ad<"20010309") or (@prad<"20010309") or (@rlad<"20010309"))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/02 12:13
L9	21	(restor\$4 near3 (particular individual\$3 select\$2 specific) adj3 object) and ((@ad<"20010309") or (@prad<"20010309") or (@rlad<"20010309"))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/02 12:28

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[Quality of Service Provision in Noncooperative Networks.. - Park, Sitharam, Chen \(1997\) \(Correct\) \(29 citations\)](#)

Quality of **Service** Provision in Noncooperative Networks:

www.cs.purdue.edu/homes/park/noncoop_qos_tech_new.ps.Z

[Description Logic Specification from the KRSS Effort \(Draft\) - Patel-Schneider, Swartout \(1993\) \(Correct\)](#)

roles (including attributes) attributes, **individuals**, concrete **individuals**, and assertions,
ksl.stanford.edu/knowledge-sharing/papers/dl-spec.ps

[Genetic Programming with Adaptive Representations - Rosca, Ballard \(1994\) \(Correct\) \(8 citations\)](#)

is in terms of programs. However changing **individual** program instructions is most often unfruitful, trees has been implemented in Common Lisp **Object** System (CLOS) and Common Lisp Interface Manager
[ftp.cs.rochester.edu/pub/papers/robotics/94.tr489.Genetic_programming_with_adaptive_representations.ps.Z](ftp://ftp.cs.rochester.edu/pub/papers/robotics/94.tr489.Genetic_programming_with_adaptive_representations.ps.Z)

[Expressing and Enforcing Timing Constraints in a.. - DiPippo, Ginis.. \(1996\) \(Correct\) \(1 citation\)](#)

client **objects** and server **objects** **Object Services**, which facilitate standard client/server as a client /2) disarm the timer /3) **restore** this thread to its original priority 7) duration of the actual call and is calculated **individually** for every method invocation. There are two
www.infosys.tuwien.ac.at/Research/Corba/archive/special/ri-tr97-252.ps.gz

[Countering Abuse of Name-Based Authentication - Schuba, Spafford \(1994\) \(Correct\) \(3 citations\)](#)

In X.509, a certificate binds a public key to a **directory** name and identifies a party that vouches for [Com91] resolution system used by most network **services** available throughout the Internet. It works Users and system administrators can build **individual** networks of trust. This proves dangerous in
www.mathcs.sjsu.edu/faculty/schuba/pub/pubs/tech-reports/94-029.ps

[A Protocol For Efficient Transfer Of Data Over Fiber/Cable Systems - Dolors Sala \(1997\) \(Correct\) \(6 citations\)](#)

range of information, communication and education **services** that will be made available to schools, first is the maximum throughput limitation of an **individual** station it must wait one round-trip delay makes the reservations according to centralized **policy** and informs the stations by means of grant
[ftp.cc.gatech.edu/pub/tech_reports/95/GIT-CC-95-18.ps.Z](ftp://ftp.cc.gatech.edu/pub/tech_reports/95/GIT-CC-95-18.ps.Z)

[An Improved Model And Architecture Of Workflow Process Management - Dengi \(1998\) \(Correct\)](#)

.31 2.3.3 Common **Object Services** .36 2.3.4 Common
hermes.bys.com.tr/~dengi/publications/thesis.ps.gz

[The Effect of Client Caching on File Server Workloads - Kevin Froese \(1996\) \(Correct\) \(6 citations\)](#)

Abstract A distributed file system provides file **service** from one or more shared file servers to a from the interleaving of the streams from **individual** clients, and, second, the presence of client that should dictate the choice of replacement **policy**. Since the performance of any system is a
www.cs.usask.ca/staff/kwf230/research/hicss96.ps.gz

[Sub-element Indexing and Probabilistic Retrieval in the POSTGRES .. - Fontaine \(1995\) \(Correct\) \(1 citation\)](#)

only slight changes [1] Some of Aoki's work was **restored** from an earlier version of POSTGRES, though tokenize process breaks up a string value into **individual** tokens that are then candidates for index keys. column are treated as a set of single elemental **objects**, one per row. This type of indexing is not
wuarchive.wustl.edu/packages/postgres/papers/CSD-95-876.ps.Z

[Augmented Space: Bringing the Physical Dimension into.. - Not, Petrelli, Stock.. \(1997\) \(Correct\) \(2 citations\)](#)

object display determined by the visitor's **individual** preferences and history of interaction (as guides can provide useful description of the **objects** displayed but they do not guarantee flexibility, hand, virtual museums may offer a more flexible **object** display determined by the visitor's **individual**
ecate.itc.it:1024/petrelli/publications/HT97-final.ps.gz

[A Bayesian Computer Vision System for Modeling Human.. - Oliver, Rosario, Pentland \(1999\) \(Correct\) \(45 citations\)](#)

and a clear Bayesian semantics for both **individual** (HMMs) and interacting or coupled (CHMMs)

vision system to detect and segment a moving **object** -human or car, for example -and a higher accurate and robust detection and tracking of the **objects** of interest in an unconstrained environment
[drew.www.media.mit.edu/~nuria/authoring/.../humanBehavior/icvs99.ps.gz](http://www.media.mit.edu/~nuria/authoring/.../humanBehavior/icvs99.ps.gz)

Compiler and Runtime Support for Programming in.. - Edjlali, Agrawal, ... (1995) (Correct) (7 citations)
 of programs. A workstation usually has an **individual** owner or small set of users who would like to [15, 20] have shown that such a dynamic scheduling **policy** results in better utilization of the available
ftp.cs.umd.edu/pub/hpsl/papers/amp.ps.Z

Cspack Client-Server Routines And Utilities - Cern (Correct)
 : 55 7.6 **Directory** utilities :
 : 4 1.2.4 SYSREQ -The System **Service** Request Facility :
wwwinfo.cern.ch/asdoc/.psdir/cspack.ps.gz

WAMM (Wide Area Metacomputer Manager): User's Guide - Version Ranieri (Correct)
 without any problems. Moreover, on each node, the **directory** containing PVM executables (usually PVM on. By default, this list does not include the **service** tasks (PVMTasker, PVMHoster and PVMMaker)
www.hensa.ac.uk/parallel/environments/pvm3/wamm/ug-eng.ps.gz

Embedded Inodes and Explicit Grouping: Exploiting Disk.. - Ganger, Kaashoek (1997) (Correct) (30 citations)
 the inodes for most files are stored in the **directory** with the corresponding name, removing a file system 1 We use the terms access time and **service** time interchangeably to refer to the time from
www.sois.alaska.edu/CSLG_index/userix_tech.97/PROCEEDINGS/ganger.ps

Speeding SciAn up - Scian Is (Correct)
 all the items shown here. Preferences Data File **Directory**: scri4d/a/users/lyons/scian/tour Rotation you can switch to a faster scheme which draws **objects** in a simpler way while interacting. See useful if the control affects the appearance of an **object** in another window, such as the brightness control
ftp.scri.fsu.edu/pub/lyons/User080Part7.ps

Scalable Internet Resource Discovery: Research Problems and.. - Bowman, Danzig (1994) (Correct) (102 citations)
 Force Research Group on Resource Discovery and **Directory Service**. 1 Introduction In its roots as the Research Group on Resource Discovery and **Directory Service**. 1 Introduction In its roots as the ARPANET, provide full-text indexing of the data found at **individual** sites. For example, a WAIS index represents
thor.csie.ntu.edu.tw/notebook/reviewed_paper/references/harvest-proj/RD_ResearchProblems_Jour.ps.gz

BinProlog 4.00 User Guide - Tarau (1995) (Correct) (1 citation)
 the BPPATH variable to point to the BinProlog src **directory**. Normally the appropriate `bp' file (a C-ified Inherit The Bp Path Environment Variable. An **Individual** User Can Also Put Something Like Setenv Bp backtrackable and surviving uses of blackboard **objects** so this primitive and the def/3, set/3, rm/2 of
www.cs.uidaho.edu/~frincke/classes/.cs470/UserGuideBinProlog.ps

The Use of Multithreaded Processors in DASH - Wamakulasuriya (Correct) (1 citation)
 memory multiprocessor architecture which employs **directory** based cache coherence. Due to the physical of multiple threads are interleaved, and "**serviced**" in a round-robin fashion. Note that this hardware) to main- tain the states of the **individual** threads. An earlier architecture, the HEP [12]
www.usc.edu/dept/ceng/pinkston/old/students/sugath/MultithreadinginDASH.ps

Dynamic Maintenance of Data Distribution for Selectivity.. - Whang, Kim, Wiederhold (1994) (Correct) (9 citations)
 correlated distributions. We show that the MLGF **directory** naturally represents a multidimensional data
dmlab.kaist.ac.kr/Publication/Ps/vldb94w.ps

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Relevance scale ☐ ☐ ☐ ☐ ☐**1 [System support for pervasive applications](#)**

Robert Grimm, Janet Davis, Eric Lemar, Adam Macbeth, Steven Swanson, Thomas Anderson, Brian Bershad, Gaetano Borriello, Steven Gribble, David Wetherall

 November 2004 **ACM Transactions on Computer Systems (TOCS)**, Volume 22 Issue 4
Full text available: [pdf\(1.82 MB\)](#)
 Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Pervasive computing provides an attractive vision for the future of computing. Computational power will be available everywhere. Mobile and stationary devices will dynamically connect and coordinate to seamlessly help people in accomplishing their tasks. For this vision to become a reality, developers must build applications that constantly adapt to a highly dynamic computing environment. To make the developers' task feasible, we present a system architecture for pervasive computing, called & ...

Keywords: Asynchronous events, checkpointing, discovery, logic/operation pattern, migration, one.world, pervasive computing, structured I/O, tuples, ubiquitous computing

2 [Improving the granularity of access control for Windows 2000](#)

Michael M. Swift, Anne Hopkins, Peter Brundrett, Cliff Van Dyke, Praerit Garg, Shannon Chan, Mario Goertzel, Gregory Jensenworth

 November 2002 **ACM Transactions on Information and System Security (TISSEC)**, Volume 5 Issue 4
Full text available: [pdf\(447.78 KB\)](#)
 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

This article presents the mechanisms in Windows 2000 that enable fine-grained and centrally managed access control for both operating system components and applications. These features were added during the transition from Windows NT 4.0 to support the Active Directory, a new feature in Windows 2000, and to protect computers connected to the Internet. While the access control mechanisms in Windows NT are suitable for file systems and applications with simple requirements, they fall short of the ...

Keywords: Access control lists, Microsoft Windows 2000, Windows NT, active directory

3 [Distributed file systems: concepts and examples](#)

Eliezer Levy, Abraham Silberschatz

 December 1990 **ACM Computing Surveys (CSUR)**, Volume 22 Issue 4
Full text available: [pdf\(5.33 MB\)](#)
 Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)


The purpose of a distributed file system (DFS) is to allow users of physically distributed

computers to share data and storage resources by using a common file system. A typical configuration for a DFS is a collection of workstations and mainframes connected by a local area network (LAN). A DFS is implemented as part of the operating system of each of the connected computers. This paper establishes a viewpoint that emphasizes the dispersed structure and decentralization of both data and con ...

4 IS '97: model curriculum and guidelines for undergraduate degree programs in information systems

Gordon B. Davis, John T. Gorgone, J. Daniel Couger, David L. Feinstein, Herbert E. Longenecker

December 1996 **ACM SIGMIS Database , Guidelines for undergraduate degree programs on Model curriculum and guidelines for undergraduate degree programs in information systems**, Volume 28 Issue 1

Full text available:  [pdf\(7.24 MB\)](#) Additional Information: [full citation](#), [citations](#)

5 File servers for network-based distributed systems

Liba Svobodova

December 1984 **ACM Computing Surveys (CSUR)**, Volume 16 Issue 4

Full text available:  [pdf\(4.23 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#), [review](#)

6 Data base directions: the next steps

John L. Berg

November 1976 **ACM SIGMOD Record , ACM SIGMIS Database**, Volume 8 , 8 Issue 4 , 2


Full text available:  [pdf\(9.95 MB\)](#) Additional Information: [full citation](#), [abstract](#)

What information about data base technology does a manager need to make prudent decisions about using this new technology? To provide this information the National Bureau of Standards and the Association for Computing Machinery established a workshop of approximately 80 experts in five major subject areas. The five subject areas were auditing, evolving technology, government regulations, standards, and user experience. Each area prepared a report contained in these proceedings. The proceedings p ...

Keywords: DBMS, auditing, cost/benefit analysis, data base, data base management, government regulation, management objectives, privacy, security, standards, technology assessment, user experience

7 Interposed request routing for scalable network storage

February 2002 **ACM Transactions on Computer Systems (TOCS)**, Volume 20 Issue 1

Full text available:  [pdf\(363.12 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

This paper explores interposed request routing in Slice, a new storage system architecture for high-speed networks incorporating network-attached block storage. Slice interposes a request switching filter---called a *μ*proxy---along each client's network path to the storage service (e.g., in a network adapter or switch). The *μ*proxy intercepts request traffic and distributes it across a server ensemble. We propose request routing schemes for I/O and file service traffic; and explore th ...

Keywords: Content switch, file server, network file system, network storage, request redirection, service virtualization

8 A structural view of the Cedar programming environment

Daniel C. Swinehart, Polle T. Zellweger, Richard J. Beach, Robert B. Hagmann

August 1986 **ACM Transactions on Programming Languages and Systems (TOPLAS)**,

Full text available:  [pdf\(6.32 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents an overview of the Cedar programming environment, focusing on its overall structure—that is, the major components of Cedar and the way they are organized. Cedar supports the development of programs written in a single programming language, also called Cedar. Its primary purpose is to increase the productivity of programmers whose activities include experimental programming and the development of prototype software systems for a high-performance personal computer. T ...


9 [Process migration](#)

September 2000 **ACM Computing Surveys (CSUR)**, Volume 32 Issue 3Full text available:  [pdf\(1.24 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Process migration is the act of transferring a process between two machines. It enables dynamic load distribution, fault resilience, eased system administration, and data access locality. Despite these goals and ongoing research efforts, migration has not achieved widespread use. With the increasing deployment of distributed systems in general, and distributed operating systems in particular, process migration is again receiving more attention in both research and product development. As hi ...

Keywords: distributed operating systems, distributed systems, load distribution, process migration

10 [A coherent distributed file cache with directory write-behind](#)

Timothy Mann, Andrew Birrell, Andy Hisgen, Charles Jerian, Garret Swart
May 1994 **ACM Transactions on Computer Systems (TOCS)**, Volume 12 Issue 2Full text available:  [pdf\(3.21 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Extensive caching is a key feature of the Echo distributed file system. Echo client machines maintain coherent caches of file and directory data and properties, with write-behind (delayed write-back) of all cached information. Echo specifies ordering constraints on this write-behind, enabling applications to store and maintain consistent data structures in the file system even when crashes or network faults prevent some writes from being completed. In this paper we describe ...

Keywords: coherence, file caching, write-behind

11 [The evolution of Coda](#)

M. Satyanarayanan
May 2002 **ACM Transactions on Computer Systems (TOCS)**, Volume 20 Issue 2Full text available:  [pdf\(441.35 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Failure-resilient, scalable, and secure read-write access to shared information by mobile and static users over wireless and wired networks is a fundamental computing challenge. In this article, we describe how the Coda file system has evolved to meet this challenge through the development of mechanisms for server replication, disconnected operation, adaptive use of weak connectivity, isolation-only transactions, translucent caching, and opportunistic exploitation of hardware surrogates. For eac ...


Keywords: Adaptation, Linux, UNIX, Windows, caching, conflict resolution, continuous data access, data staging, disaster recovery, disconnected operation, failure, high availability, hoarding, intermittent networks, isolation-only transactions, low-bandwidth networks, mobile computing, optimistic replica control, server replication, translucent cache management, weakly connected operation

12 Experience Using Multiprocessor Systems—A Status Report

Anita K. Jones, Peter Schwarz

June 1980 **ACM Computing Surveys (CSUR)**, Volume 12 Issue 2Full text available:  [pdf\(4.48 MB\)](#) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**13 Peer-to-peer infrastructure: Pastiche: making backup cheap and easy**


Landon P. Cox, Christopher D. Murray, Brian D. Noble

December 2002 **ACM SIGOPS Operating Systems Review**, Volume 36 Issue SIFull text available:  [pdf\(1.65 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Backup is cumbersome and expensive. Individual users almost never back up their data, and backup is a significant cost in large organizations. This paper presents *Pastiche*, a simple and inexpensive backup system. Pastiche exploits excess disk capacity to perform peer-to-peer backup with no administrative costs. Each node minimizes storage overhead by selecting peers that share a significant amount of data. It is easy for common installations to find suitable peers, and peers with high ove ...

14 Improving the granularity of access control in Windows NT


Michael M. Swift, Peter Brundrett, Cliff Van Dyke, Praerit Garg, Anne Hopkins, Shannon Chan, Mario Goertzel, Gregory Jensenworth

May 2001 **Proceedings of the sixth ACM symposium on Access control models and technologies**Full text available:  [pdf\(259.87 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents the access control mechanisms in Windows 2000 that enable fine-grained protection and centralized management. These mechanisms were added during the transition from Windows NT 4.0 to support the Active Directory, a new feature in Windows 2000. We first extended entries in access control lists to allow rights to apply to just a portion of an object. The second extension allows centralized management of object hierarchies by specifying more precisely how access control lis ...

Keywords: Windows 2000, access control lists**15 Distributed operating systems**


Andrew S. Tanenbaum, Robbert Van Renesse

December 1985 **ACM Computing Surveys (CSUR)**, Volume 17 Issue 4Full text available:  [pdf\(5.49 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Distributed operating systems have many aspects in common with centralized ones, but they also differ in certain ways. This paper is intended as an introduction to distributed operating systems, and especially to current university research about them. After a discussion of what constitutes a distributed operating system and how it is distinguished from a computer network, various key design issues are discussed. Then several examples of current research projects are examined in some detail ...

16 Session 7: Squirrel: a decentralized peer-to-peer web cache

Sitaram Iyer, Antony Rowstron, Peter Druschel

July 2002 **Proceedings of the twenty-first annual symposium on Principles of distributed computing**Full text available:  [pdf\(1.22 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)


This paper presents a decentralized, peer-to-peer web cache called Squirrel. The key idea is to enable web browsers on desktop machines to share their local caches, to form an

efficient and scalable web cache, without the need for dedicated hardware and the associated administrative cost. We propose and evaluate decentralized web caching algorithms for Squirrel, and discover that it exhibits performance comparable to a centralized web cache in terms of hit ratio, bandwidth usage and latency. It ...

17 Level II technical support in a distributed computing environment

Tim Leehane

September 1996 **Proceedings of the 24th annual ACM SIGUCCS conference on User services**

Full text available:  [pdf\(5.73 MB\)](#)

Additional Information: [full citation](#), [references](#), [index terms](#)



18 The DGSA: unmet information security challenges for operating system designers

Edward A. Feustel, Terry Mayfield

January 1998 **ACM SIGOPS Operating Systems Review**, Volume 32 Issue 1

Full text available:  [pdf\(1.48 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)


The Department of Defense (DoD) Goal Security Architecture (DGSA) introduces a broader view of information security from that previously held by the Department, one which has much more in common with the requirements of an inter-networked commercial view of information security. The purpose of this paper is to introduce designers of operating systems to the most important aspects of the DGSA conceptual framework in order to open discussions on both the suitability of the framework and the feasibility ...



19 Operating System Structures to Support Security and Reliable Software

Theodore A. Linden

December 1976 **ACM Computing Surveys (CSUR)**, Volume 8 Issue 4

Full text available:  [pdf\(3.49 MB\)](#)


Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)



20 The clearinghouse: a decentralized agent for locating named objects in a distributed environment

Derek C. Oppen, Yogen K. Dalal

July 1983 **ACM Transactions on Information Systems (TOIS)**, Volume 1 Issue 3

Full text available:  [pdf\(1.73 MB\)](#)

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